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**AMENDED CLAIMS**

CLAIMS

1. (Amended) Process for producing  
fluorinated polymers by miniemulsion polymerization in  
5 two stages comprising

a) emulsification of a mixture of monomers  
comprising:

from 20 to 99.9% by weight of at least one  
monomer selected from fluorinated (meth)acrylic  
10 monomers (A),

from 0.1 to 15% by weight of at least one  
monomer selected from acrylamide and its compounds,  
including N-methylolacrylamide, and

from 0 to 65% by weight of at least one  
15 monomer selected from nonfluorinated acrylic or vinyl  
monomers (B),

using energetic emulsifying treatment,  
including ultrasound, colloid mill or high-pressure  
homogenizer, and

20 b) polymerization of the said mixture at a  
temperature ranging from 20 to 100°C using radical  
initiators,

the level of organic cosolvent being less  
than 0.2% by weight of the total weight of the  
25 emulsion.

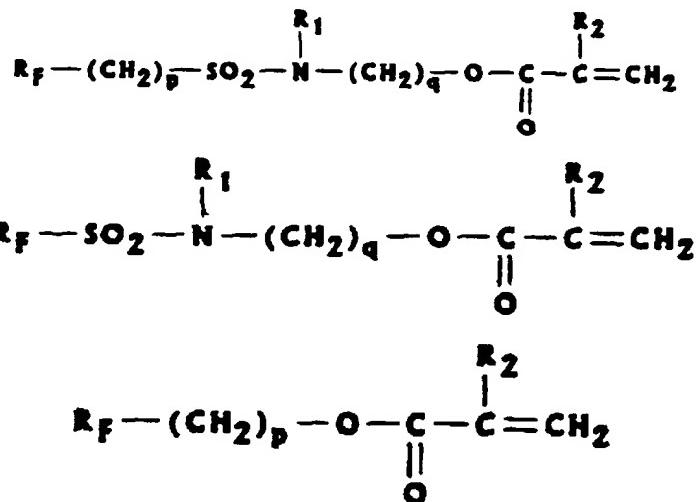
2. (Amended) Process according to Claim 1,  
wherein the mixture of monomers is stabilized by at  
least one surfactant selected from the group comprising  
nonionic, anionic or cationic surfactants, including

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polyethoxylated sulphosuccinate compounds or quaternary ammonium compounds.

3. (Amended) Process according to Claim 1,  
wherein the fluorinated monomer A is selected from the  
5 group comprising the monomers corresponding to the  
following formulae:



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in which  $R_F$  represents a perfluorinated radical with a linear or branched chain comprising 2 to 20 carbon atoms, p and q, which are identical or different, each represent an integer ranging from 1 to 20,  $R_1$  represents  
15 a linear or branched alkyl radical comprising from 1 to 4 carbon atoms and  $R_2$  represents a hydrogen atom or a methyl radical.

4. (Amended) Process according to claim 1,  
wherein the monomer B is selected from the group  
20 comprising:

- $C_{1-C_{22}}$  alkyl (meth)acrylates
- (meth)acrylates, the radical of which carries an oxyethylenated linkage

- vinyl monomers, including vinyl chloride or vinyl acetate

- acrylic and methacrylic acids.

5. (Amended) Process according to claim 1,  
5 wherein the initiator is selected from the group comprising:

- peroxides

- persalts, including persulphates

- azo compounds, such as 4,4'-azobis

- 10 (4-cyanopentanoic acid).

6. (Amended) Aqueous dispersion comprising fluorinated polymers obtained according to the process of claim 1, the content of organic cosolvent of which is less than 0.2% by weight of the total weight of the  
15 emulsion and the level of coagulum being less than 1% by weight of the total weight of monomers.

7. (Amended) Hydrophobic and oleophobic treatment of substrates comprising treatment of, leather, textiles, fitted carpets, paper and  
20 construction materials with an aqueous dispersion of the polymer of claim 6.

8. (New) Process according to claim 3,  
wherein the integer is from 1 to 4.